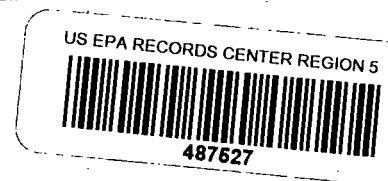


DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

INDIANAPOLIS

OFFICE MEMORANDUM

Date: December 7, 2005

To: Kenneth C. McDaniel
State Cleanup GroupThru: Fran Metcalfe
Steve BuckelRls for SB
12/7/05From: Stephen J. Sommer *APR 12 7 05*
OLQ Chemistry SectionSubject: Analytical Results for Lusher Avenue
Elkhart, Elkhart County, Indiana
Site #0000028
Sampled: October 20, 2005
Sample Numbers: LQ2301 - LQ2303
Microbac

The analytical results for the samples identified above have been validated according to the quality criteria contained in BAA 2-003 and Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW846) Third Edition, Update III. Based on the evaluation, it has been determined that the results are acceptable for use. Reasons that data are qualified as estimated or unusable are explained below. This memorandum should remain attached to the original laboratory reports for reference.

General Comments:

The purpose of this sampling event was to determine if volatile organic compounds (VOCs) have impacted the groundwater in a residential well at concentrations that exceed their respective RISC Residential Default Closure Levels (RDCLs).

Sampling Quality Assurance/Quality Control:

The field documentation did allow for interpretation of the data.

Field duplicate samples are used to establish the representativeness of field sampling (i.e., the homogeneity and sample variability). The field duplicates, samples LQ2301 and LQ2302, were collected from the residential well at 1619 Avalon Street. The field duplicates compared well.

Field blanks (trip and/or equipment) are used to identify sample contamination resulting from sampling equipment, sample containers, chemical preservatives, and the handling and soil transportation of samples. A trip blank was utilized and required for this sampling event. The

laboratory supplied trip blank contained Acetone and Trichloroethene at 2.2 parts per billion (ppb) and 0.9 ppb, respectively. Since these values are more than the method detection limit but less than the reporting limit, these results are estimated.

Since dedicated sampling equipment was utilized for sample collection, an equipment blank was not required nor utilized for this sampling event.

Laboratory Quality Assurance/Quality Control:

The laboratory performed all quality assurance/quality control (QA/QC) measures necessary to validate the analytical results for this sampling event. The data was determined to be valid. Based on the validation of the analytical results, the following are comments and/or qualifications made regarding the data:

Groundwater

VOCs:

Two (2) groundwater samples and one laboratory supplied trip blank were analyzed for VOCs by SW846 Method 8260B. According to the laboratory, due to an internal error, these samples were stored at room temperature after receipt, thereby failing the 4 degrees C after receipt and prior to analysis criteria. Received on Saturday, the exceeded temperature was realized on Monday. Therefore, all of the results are estimated, biased low.

Acetone was detected in the method blank at 1.8 ppb. Since the trip blank and the method blank contained detections of Acetone at concentrations below the reporting limit, but above the method detection limit, Acetone is most likely a laboratory artifact and may not be actually present in the sample. Additionally, the concentrations of Acetone detected in the trip blank does not exceed ten times (10X) the concentration detected in the method blank. Therefore, the results for Acetone are estimated. No additional qualifiers were identified.

Results:

Groundwater

VOCs:

Although the results are estimated, the detected concentrations of 1,1-Dichloroethane and Trichloroethene in the residential groundwater samples were above their respective RISC RDCLs. All of the other estimated concentrations in the environmental samples were well below their respective RISC RDCLs. (See attached chart).

Kenneth C. McDaniel - Lusher Avenue - December 7, 2005

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Conclusions:

The data are usable for the overall project goal.

1,1-Dichloroethane and Trichloroethene have impacted the groundwater in a residential well at concentrations that exceed their respective RISC RDCLs.

Attachments

SITE INFORMATION *

IDEM Sample #s: <u>LQ 2301 - LQ 2308</u>	Sampling Date(s): <u>18 MAY 2005</u>
Site Name: <u>LUSHER AVENUE</u>	Site ID #: <u>0000028</u>
Street Address: <u>1619 AVALON ST</u>	City: <u>ELKHART</u> County: <u>ELKHART</u>

Site Representative(s): KENNETH C MCDANIEL JR NA Company: NA
IDEM Samplers: KENNETH C MCDANIEL Laboratory: MICRO BAC
Weather Conditions: Sky CLOUDY Ground SANDY Wind SLIGHT Temp 55°F Humidity 100%

Sample Types (check all applicable):	<input type="checkbox"/> Mon. Well	<input checked="" type="checkbox"/> Res. Well	<input type="checkbox"/> Creek	<input type="checkbox"/> Leachate	<input type="checkbox"/> Ditch
<input type="checkbox"/> Drainage Tile	<input type="checkbox"/> Lagoon	<input type="checkbox"/> Pond	<input type="checkbox"/> Sludge	<input type="checkbox"/> Sediment	<input type="checkbox"/> Industrial Waste
<input type="checkbox"/> Waste Pile	<input type="checkbox"/> Soil	<input type="checkbox"/> Truck	<input type="checkbox"/> Drummed Waste	<input type="checkbox"/> Waste Liquid	<input type="checkbox"/> Oil
<input type="checkbox"/> Solvent	<input type="checkbox"/> Sand	<input type="checkbox"/> Ash	<input type="checkbox"/> Other _____		
Sample Choice (check):	<input type="checkbox"/> Grab	<input type="checkbox"/> Composite	<input type="checkbox"/> Statistical	<input type="checkbox"/> Random	<input type="checkbox"/> Judgmental

Sampling Equipment Used: NA
Decontamination Procedures: NA
Field Test Equipment Used: NA
Calibration Notes: NA

Container Source: MICRO BAC Sample Preservative Source: MICRO BAC
Blank Water Source: MICRO BAC Decontamination Water Source: NA

Program Area (check):	<input type="checkbox"/> RCRA	<input type="checkbox"/> CERCLA	<input type="checkbox"/> Solid Waste	<input type="checkbox"/> DOD	<input type="checkbox"/> LUST/UST	<input type="checkbox"/> VRP
	<input type="checkbox"/> State Cleanup	<input type="checkbox"/> Emergency Response	<input checked="" type="checkbox"/> Other <u>IMMEDIATE REMEDIAL ACTION</u>			
Purpose (check):	<input type="checkbox"/> Complaint	<input type="checkbox"/> Compliance	<input type="checkbox"/> Enforcement	<input type="checkbox"/> Other _____		
Constituents Expected: _____	Handling Precaution: <input type="checkbox"/> Yes <input type="checkbox"/> No					

Photos Taken? ☐ Yes ☐ No Send analytical data review to: _____ Phone: _____

Other Notes or Deviations from Sampling Plan: _____

Revised 09-11-00

Sampler Signature: Kenneth C. McDaniel Date: 20 OCT 2005

* This form is for general use in OLQ sampling projects.

SAMPLE FIELD SHEET *

Site Name: <u>LUSHER AVENUE</u>	County: <u>ELKHART</u>
IDEM/OLQ Sample #: <u>LQ 2301</u>	Sample ID: <u>12124</u>
Collection Date: <u>20 / OCT / 2005</u>	Time: <u>12:13</u> AM / <u>PM</u>

Sample Types (check all applicable): ☐ Mon. Well ☒ Res. Well ☐ Creek ☐ Leachate ☐ Ditch

<input type="checkbox"/> Drainage Tile	<input type="checkbox"/> Lagoon	<input type="checkbox"/> Pond	<input type="checkbox"/> Sludge	<input type="checkbox"/> Sediment	<input type="checkbox"/> Industrial Waste
<input type="checkbox"/> Waste Pile	<input type="checkbox"/> Soil	<input type="checkbox"/> Truck	<input type="checkbox"/> Solvent	<input type="checkbox"/> Oil	<input type="checkbox"/> Drummed Waste
<input type="checkbox"/> Waste Liquid	<input type="checkbox"/> Sand	<input type="checkbox"/> Ash	<input type="checkbox"/> Trip Blank	<input type="checkbox"/> Field Blank	<input type="checkbox"/> Equipment Blank
<input type="checkbox"/> Background	<input type="checkbox"/> MS/MSD	<input checked="" type="checkbox"/> Duplicate of <u>LQ 2302</u>		<input type="checkbox"/> Other _____	

Containers:	Volume	Material	Quantity	Preservative	Analysis
	<u>40ML</u>	<u>GLASS</u>	<u>3</u>	<u>HCL</u>	<u>VOA</u>

Sample Location Information: (location marker, depth taken, flow rate, vegetation damage, wildlife present, etc.)

1619 AVALON STREET, ELKHART, IN
RESIDENT - MICHAEL KEYSER 574-522-8646

For Well Samples: Well purged less than ☐ 1 ☐ 2 ☐ 4 ☐ 6 ☐ 12 ☐ 24 ☐ 48 hours prior to sampling.
Purged to dryness? ☐ Yes ☐ No Approx. ☐ 1 ☐ 2 ☐ 3 ☐ 5 ☐ >5 well volumes.

Sampling Equipment Used: _____

Field Test Performed Result

Field Test Performed Result

Sample Appearance and Observations: (color, odor, clarity, suspended solids, reaction to preservatives, etc.)

Sample collected in basement prior to carbon filter

Deviations from Sampling Plan: _____

Revision 09-11-00

* This form is for general use in OLQ sampling projects.

Sampler Signature: Wendy C. Moul Date: 20 OCT 2005

SAMPLE FIELD SHEET *

Site Name: LUSHER AVENUE
IDEM/OLQ Sample #: LQ 2302
Collection Date: 20 / OCT / 2005

County: ELKHART
Sample ID: 12:24
Time: 7:13 AM / PM

Sample Types (check all applicable): ☐ Mon. Well ☒ Res. Well ☐ Creek ☐ Leachate ☐ Ditch
☐ Drainage Tile ☐ Lagoon ☐ Pond ☐ Sludge ☐ Sediment ☐ Industrial Waste
☐ Waste Pile ☐ Soil ☐ Truck ☐ Solvent ☐ Oil ☐ Drummed Waste
☐ Waste Liquid ☐ Sand ☐ Ash ☐ Trip Blank ☐ Field Blank ☐ Equipment Blank
☐ Background ☐ MS/MSD ☒ Duplicate of LQ 2301 ☐ Other _____

Containers:	Volume	Material	Quantity	Preservative	Analysis
	<u>40ML</u>	<u>GLASS</u>	<u>9</u>	<u>HCL</u>	<u>VOA</u>

Sample Location Information: (location marker, depth taken, flow rate, vegetation damage, wildlife present, etc.)

1619 AVALON STREET, ELKHART, IN
RESIDENT - MICHAEL KEYER 574-522-8646

For Well Samples: Well purged less than ☐ 1 ☐ 2 ☐ 4 ☐ 6 ☐ 12 ☐ 24 ☐ 48 hours prior to sampling.
Purged to dryness? ☐ Yes ☐ No Approx. ☐ 1 ☐ 2 ☐ 3 ☐ 5 ☐ >5 well volumes.

Sampling Equipment Used: _____

Field Test Performed Result

Field Test Performed Result

Sample Appearance and Observations: (color, odor, clarity, suspended solids, reaction to preservatives, etc.)

Sample collected in basement given to carbon filter

Deviations from Sampling Plan: _____

Revision 09-11-00

Sampler Signature: Kimberly C. McDaniel Date: 20 OCT 2005

* This form is for general use in OLQ sampling projects.

SAMPLE FIELD SHEET *

Site Name: <u>LUSHER AVENUE</u>	County: <u>ELKHART</u>
IDEM/OLQ Sample #: <u>LQ2303</u>	Sample ID: _____
Collection Date: <u>20 OCT / 2005</u>	Time: <u>12 : 00 AM / PM</u>

Sample Types (check all applicable): ☐ Mon. Well ☐ Res. Well ☐ Creek ☐ Leachate ☐ Ditch

☐ Drainage Tile ☐ Lagoon ☐ Pond ☐ Sludge ☐ Sediment ☐ Industrial Waste

☐ Waste Pile ☐ Soil ☐ Truck ☐ Solvent ☐ Oil ☐ Drummed Waste

☐ Waste Liquid ☐ Sand ☐ Ash ☒ Trip Blank ☐ Field Blank ☐ Equipment Blank

☐ Background ☐ MS/MSD ☐ Duplicate of _____ ☐ Other _____

Containers:	Volume	Material	Quantity	Preservative	Analysis
	<u>40ML</u>	<u>GLASS</u>	<u>2</u>	<u>HCL</u>	<u>VOA</u>

Sample Location Information: (location marker, depth taken, flow rate, vegetation damage, wildlife present, etc.)

TRIP BLANK PROVIDED BY MICRO BAC

For Well Samples: Well purged less than ☐ 1 ☐ 2 ☐ 4 ☐ 6 ☐ 12 ☐ 24 ☐ 48 hours prior to sampling.
Purged to dryness? ☐ Yes ☐ No Approx. ☐ 1 ☐ 2 ☐ 3 ☐ 5 ☐ >5 well volumes.

Sampling Equipment Used: _____

Field Test Performed Result

Field Test Performed Result

Sample Appearance and Observations: (color, odor, clarity, suspended solids, reaction to preservatives, etc.)

Deviations from Sampling Plan: _____

Revision 09-11-00

Sampler Signature: [Signature] Date: 20 OCT 2005

* This form is for general use in OLQ sampling projects.

State Form 42091 (R / 2-03)

Indianapolis, IN 46206-6015

(7) DISTRIBUTION: PINK COPY - IDEM Sampler YELLOW COPY - Lab (Keep) WHITE COPY - Lab (To be Returned to IDEM with Data Package)

OLQ CHEMISTRY - REFER TO ATTACHED MEMO

Volatile Organic Analysis

Site Name: Lusher Avenue
 Site Number: 0000028
 Location: Elkhart, IN, Elkhart County
 Date Sampled: 20-Oct-05
 Date Reported: 18-Nov-05
 Sample Numbers: LQ2301 - LQ2303
 Lab: Microbac

Water

UNITS: ug/L

Sample #		Type/ID#	1,1-Dichloroethane	1,1-Dichloroethene	Acetone	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1,1-Trichloroethane	Trichloroethene
Lab	IDEM								
		Reporting Limit>	1	1	5	1	1	1	20
		RISC Residential Default Closure Level >	5	7	950	70	100	200	5
ME0510670-01A	LQ2301	1619 Avalon Street **							
ME0510670-02A	LQ2302	1619 Avalon Street							
ME0510670-03A	LQ2303	Trip Blank*							

* BLANK (Type indicated) Empty Box indicates NON-DETECTABLE

** FIELD DUPLICATE NR = NOT RUN NA=NOT AVAILABLE

Bold = above the RISC Residential Default Closure Level